

Title (en)

A PLASMID VECTOR FOR EXPRESSION IN BACILLUS AND USED FOR CLONING THE STRUCTURAL GENE WHICH CODES FOR THE HUMAN GROWTH HORMONE AND A METHOD OF PRODUCING THE HORMONE

Publication

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Application

**EP 87830142 A 19870413**

Priority

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- US 83765992 A 19920214

Abstract (en)

[origin: EP0245218A2] The description relates to a plasmid vector for expression in Bacillus and used for cloning the structural gene which codes for the human growth hormone, a recombinant DNA molecule comprising the plasmid vector and the structural gene of the human growth hormone and a method of preparing the hormone comprising inserting the recombinant DNA molecule into strains of Bacillus and cultivating the resulting transformed strains in a suitable culture environment and recovering the thus-synthesized hormone from the cells.

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IPC 8 full level

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Citation (search report)

- [Y] GB 2126590 A 19840328 - ENI ENTE NAZ IDROCARB
- [Y] EP 0146901 A1 19850703 - TAKEDA CHEMICAL INDUSTRIES LTD [JP]
- [X] NATURE, vol. 281, 18th October 1979, pages 544-548, Macmillan Journals Ltd, London, GB; D.V. GOEDDEL et al.: "Direct expression in Escherichia coli of a DNA sequence coding for human growth hormone"
- [Y] MOLECULAR AND GENERAL GENETICS, vol. 186, 1982, pages 339-346, Heidelberg, DE; C.P. MORAN JR. et al.: "Nucleotide sequences that signal the initiation of transcription and translation in Bacillus subtilis"
- [A] GENE, vol. 39, no. 1, 1985, pages 117-120, Elsevier Science Publishers, Amsterdam, NL; T. TOKUNAGA et al.: "Expression of a synthetic human growth hormone gene in yeast"
- [A] JOURNAL OF BACTERIOLOGY, vol. 146, no. 3, June 1981, pages 1162-1165, Washington, DC, US; D.M. WILLIAMS et al.: "Cloning restriction fragments that promote expression of a gene in Bacillus subtilis"
- [A] BIOCHEMICAL SOCIETY SYMPOSIUM, vol. 48, 1983, pages 233-244, London, GB; H.A. DE BOER et al.: "A hybrid promoter and portable shine-dalgarno regions of Escherichia coli"
- [XP] CHIMICAOGGI, no. 3, March 1987, pages 73-75, Milan, IT; M. DEL BUE et al.: "Plasmid expression vectors for B. subtilis"

Cited by

DE4437005C1; EP0306673A1; US5721137A; EP0681027A3

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